

APPARATUS AND METHOD FOR PROVIDING MULTIPLE
POWER SUPPLY VOLTAGES TO AN INTEGRATED CIRCUIT

ABSTRACT OF THE DISCLOSURE

There is disclosed an apparatus and method for providing
multiple power supply voltages to an integrated circuit. In an
integrated circuit of the type comprising at least two power
supply domains in which each power supply domain comprises at
least one module powered by the same voltage level, the apparatus
and method of the present invention blocks an output signal in
a first power supply domain from being sent to a second power
supply domain when the second power supply domain is in a low
power mode. The apparatus and method of the present invention
also blocks an output signal from a first power supply domain
from being received in a second power supply domain when the
first power supply domain is in a low power mode. Power sense
cells are used to determine the status of power supply domains
and logic circuits are used to block undesired signals. The
present invention also properly synchronizes clock signals when
power supply domains are activated or inactivated.